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Harry M. Barton  
Senior Counsel  
Legal Department -- Regulatory

October 15, 2019

**By Hand Delivery**

Ms. Lora W. Johnson, CMC, LMMC  
Clerk of Council  
Council of the City of New Orleans  
Room 1E09, City Hall  
1300 Perdido Street  
New Orleans, LA 70112

Re: **In Re: 2018 Triennial Integrated Resource Plan of Entergy New Orleans, LLC**  
**Docket No. UD-17-03**

Dear Ms. Johnson:

Entergy New Orleans, LLC respectfully submits its October 29, 2019 Public Technical Meeting Materials in the above referenced Docket. Please file an original and two copies into the record in the above referenced matter, and return a date-stamped copy to our courier.

Should you have any questions regarding the above, I may be reached at (504) 576-2984. Thank you for your assistance with this matter.

Sincerely,

  
Harry M. Barton

HMB/bkd

Enclosures

cc: Official Service List (*via email*)

RECEIVED  
OCT 15 2019  
BY: 

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# ENERGY SMART PY10-12 IMPLEMENTATION PLAN DEMAND RESPONSE

OCTOBER 29, 2019

**ENO 2018 IRP-Docket UD-17-03  
Technical Meeting #6**



# AGENDA

- Introductions
- Technical Meeting #5 Recap
- RFP & Implementation Plan Timeline
- Proposed PY10-12 DR Offerings
- Third Party Administration, Implementation and Evaluation Team
- Proposed PY 10-12 Demand Response Program Offerings
  - Residential
  - Commercial & Industrial
- Potential Studies Review
- Questions & Discussion



## TECHNICAL MEETING #5 RECAP

- Technical Meeting #5 was held September 11, 2019
  - Proposed new energy efficiency offerings under two scenarios
  - Briefly discussed demand response offerings to come
  - Mentioned the RFP for Commercial Demand Response
    - Issued 7/24/2019
    - 5 Respondents
- Energy Efficiency topics not discussed
  - Green Light New Orleans
  - Evaluation, Measurement and Verification



# COMMERCIAL DEMAND RESPONSE RFP TIMELINE

Commercial Demand Response RFP Timeline	
RFP Issued	July 24, 2019
Bids Submitted	August 21, 2019
Technical Meeting with Advisors and Stakeholders	September 11, 2019
Oral Presentations	September 17-19, 2019
Winners Notified	October 1, 2019



# ENERGY SMART IMPLEMENTATION TIMELINE

Implementation Plan Timeline	
Technical Meeting #6	October 29, 2019
File Implementation Plan	November 22, 2019
Program Year 10 Begins	January 1, 2020



# ENERGY SMART DEMAND RESPONSE PROGRAM TEAM

Third-Party Administrator	Third-Party Implementers	Third-Party Evaluator
APTIM	APTIM	ADM Associates
Honeywell*	Franklin Energy	
	EnergyHub*	
	Honeywell*	
	Enbala*	
	ILSI Engineering	
*Indicates a new program vendor		

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# PROPOSED PY10-12 DR OFFERINGS



## PY10-12 PROPOSED OFFERINGS

- **Residential Offerings – Aptim/Energy Hub**
  - Direct Load Control Switches (DLC)
  - Bring-Your-Own-Thermostat (BYOT)
- **Commercial & Industrial Offerings**
  - Small Commercial & Industrial - Aptim/Energy Hub
  - Large Commercial & Industrial – Honeywell/Enbala

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# RESIDENTIAL DEMAND RESPONSE APTIM/ ENERGYHUB



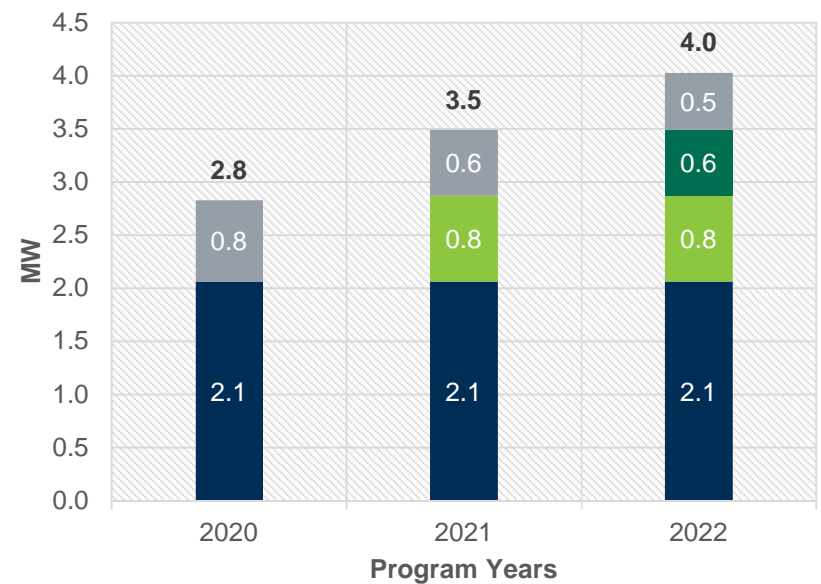
## OVERVIEW & OBJECTIVES

- Continue to leverage the DLC switch population while tapping into the growing base of connected thermostats installed in the ENO territory
- Leverage technical integrations with DLC switches and thermostat manufacturers to enroll, monitor, and control the residential aggregation for peak demand reduction
- Dispatch DR events via duty cycling (DLC) or temperature offset (BYOT) using the Franklin Energy and EnergyHub platforms
- Participants receive an up-front enrollment incentive and an ongoing annual incentive for continued participation in the DLC and BYOT offerings
- Lay the foundation for future DR and DER load management programs (water heaters, EVs, solar inverters, batteries) and MISO market participation (LMR assets)

# RESIDENTIAL OFFERINGS OVERVIEW

<b>Customer Type:</b>	Residential customers
<b>Event Strategy:</b>	Annual, Monday-Friday (non-holidays), 12-8pm, up to four hours per event. No more than three consecutive event days and no more than fifteen events per program year
<b>Control Strategy:</b>	Temperature setback (up to 4 degrees) with up to 90-minute pre-cool, use of Firm Load Dispatch (FLD) as applicable
<b>Eligibility:</b>	Entergy customers in Orleans parish with active electric service, working central AC, and one or more connected devices from an EnergyHub device partner
<b>Incentive:</b>	\$25 enrollment incentive / \$40 annual incentive

**Load Reduction Goals**



■ BYOT 2020 Load Shed ■ BYOT 2021 Load Shed  
■ BYOT 2022 Load Shed ■ DLC Load Shed

## RESIDENTIAL BUDGET & SAVINGS

Residential	EM&V	Program Costs	Total Budget	kW Target	Participants
Program Year 10	\$42,351	\$609,185	\$651,536	2,830	3,416
Program Year 11	\$40,761	\$586,323	\$627,084	3,494	3,971
Program Year 12	\$42,367	\$609,416	\$651,782	4,032	4,444
<b>Totals</b>	<b>\$125,478</b>	<b>\$1,804,923</b>	<b>\$1,930,402</b>		

## RESIDENTIAL BUDGET & SAVINGS – BYOT & DLC SWITCHES

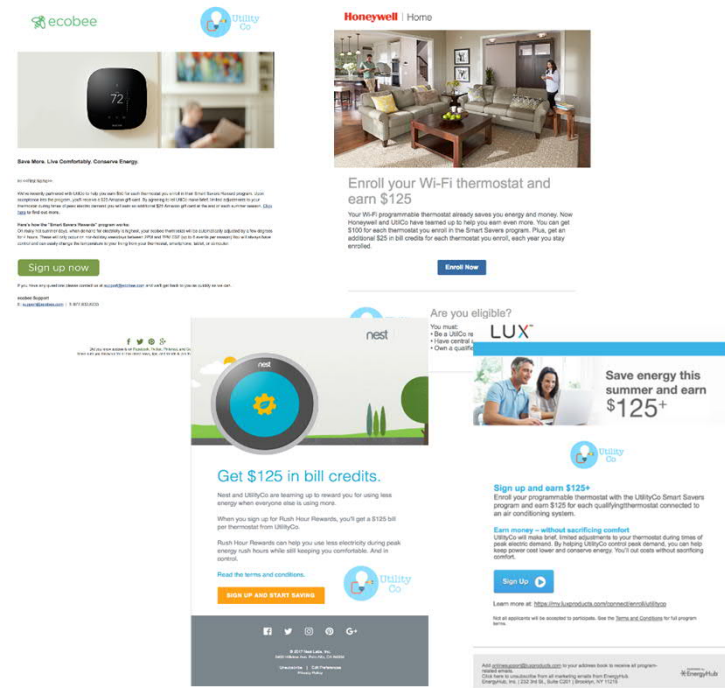
Residential - BYOT	EM&V	Program Costs	Total Budget	kW Target	Participants
Program Year 10	\$18,254	\$262,569	\$280,822	2,066	2,066
Program Year 11	\$19,600	\$281,928	\$301,528	2,871	2,871
Program Year 12	\$22,602	\$325,116	\$347,719	3,494	3,494
<b>Totals</b>	<b>\$60,456</b>	<b>\$869,613</b>	<b>\$930,069</b>		

Residential - DLC Switches	EM&V	Program Costs	Total Budget	kW Target	Participants
Program Year 10	\$24,097	\$346,616	\$370,713	764	1,350
Program Year 11	\$21,162	\$304,394	\$325,556	623	1,100
Program Year 12	\$19,764	\$284,299	\$304,063	538	950
<b>Totals</b>	<b>\$65,023</b>	<b>\$935,310</b>	<b>\$1,000,333</b>		

# BRING YOUR OWN THERMOSTAT (BYOT)

## Marketing & Outreach

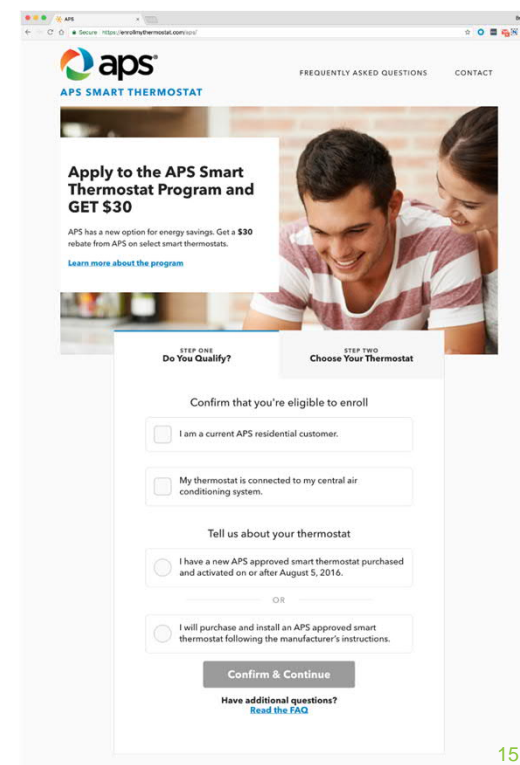
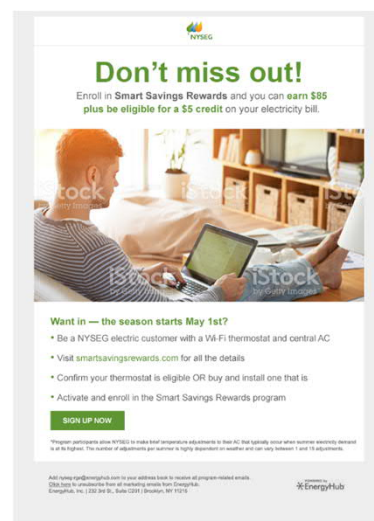
- EnergyHub coordinates device partner-driven digital campaigns (email, web and mobile) featuring partner and ENO branding (“Partner-centric” marketing)
- Aptim coordinates a marketing campaign focused on raising awareness of the BYOT program (“Program-centric marketing”)



# BRING YOUR OWN THERMOSTAT (BYOT)

## Enrollment

- Partner-centric marketing directs customers to an enrollment website to apply to the program
- Program-centric marketing directs customers to an EnergyHub-powered "microsite"
- APTIM processes enrollments in the DERMS and customers are automatically available for DR dispatch





# BRING YOUR OWN THERMOSTAT (BYOT)

## Participation Guidelines

- Residential customers with active electric service, working central AC, and a qualifying connected thermostat can participate
- Customers must provide basic information and accept T&Cs to apply
- ENO can notify customers of upcoming events (e.g., event date/time, duration, opt-out instructions)
- DR event parameters will be agreed upon as part of the program launch process
- Customers can opt out of DR events and contact support to unenroll from the BYOT program

# BRING YOUR OWN THERMOSTAT (BYOT)

## Trade Ally Recruitment & Training

- The BYOT model leverages the existing base of connected thermostats
  - Device manufacturers act as the “Tier 1” contact for device-related customer support
  - Traditional trade ally hardware installation/maintenance not required
- APTIM trains device partners on the BYOT program, and establishes routing protocols for inquiries that manufacturers cannot answer

## Installation Process & Device Management

- Participation driven from the existing base of approximately 14,000 connected thermostats online in ENO’s service territory
- Connected thermostats installed through APTIM’s EE programs can be directly enrolled in BYOT
- The Mercury DERMS provides near real-time access to device data through device partner integrations

# BRING YOUR OWN THERMOSTAT (BYOT)

## Data Management & Tracking

- The DERMS dashboard provides a portfolio-level view of the DR aggregation
- DR event reporting available during and after the completion of an event for M&V and analysis
- Customer enrollment data (e.g., Accepted, Rejected, Unenrolled) and device reports are available for download on demand
- Data can be exported to APTracks

## Evaluation, Measurement & Verification (EM&V)

- DR event M&V reports (e.g., participation statistics, load and load shed interval data) are available for download following the completion of an event
- APTIM can export M&V reports for offline analysis or to provide to ADM

# DIRECT LOAD CONTROL (DLC) SWITCH

## Marketing & Outreach

- Marketing will be passive as DLC switches will be a secondary option for customers that do not want smart thermostats or are not eligible to receive a smart thermostat
  - DLC switches will be offered in the fine print of the smart thermostat marketing
- Targeted marketing will be executed to existing EasyCool customers providing them the option to trade their DLC switch for a smart thermostat

## Enrollment & Participation

- Customers can enroll online through the program website or via phone to the call center
- Targeted campaigns for existing switch participants will be conducted through digital email, direct mail, and/or outbound calling campaign
- Customers are automatically enrolled in the EasyCool incentive program upon installation of the switch

# DIRECT LOAD CONTROL (DLC) SWITCH

## Installation Process & Device Management

- DLC switches are installed and serviced by field technicians
- Installation appointments are scheduled as necessary for landlord-tenant and no access projects. All other installations occur without customer attendance required (all installations are outdoors)
- Program staff manage all service and removal requests as needed
- Customers that request removal or trade the switch for the thermostat will have their devices removed, which can then be put back into inventory for future customers

# DIRECT LOAD CONTROL (DLC) SWITCH

## Data Management & Tracking

- Implementation staff will use Efficiency Manager 2.0 to track all customer information, installation details, and incentives using a field tool known as Efficiency Clipboard
- Data is transferred to APTracks

## Evaluation, Measurement & Verification (EM&V)

- ENO's Third-Party Evaluator, ADM, conducts in-field datalogging on participating customers' units and during events
- Results are presented to Energy Smart administration and implementation staff annually

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# COMMERCIAL & INDUSTRIAL DEMAND RESPONSE

# OVERVIEW & OBJECTIVES

## Key Objectives

- Introduce new Demand Response offerings targeting Commercial & Industrial customers of all sizes
- Support C&I customers in managing demand-based charges on their utility bill
- Expand the breadth and depth of peak demand management capabilities available to ENO
- Implement centralized online software solutions for enrollment, DR event deployment, data management, and reporting
- Offer hands-free participation for Small C&I customers (<100 kW) with supporting incentives, to encourage participation
- Present dedicated demand response expertise to offer Large C&I customers (>100 kW) tailored demand management options



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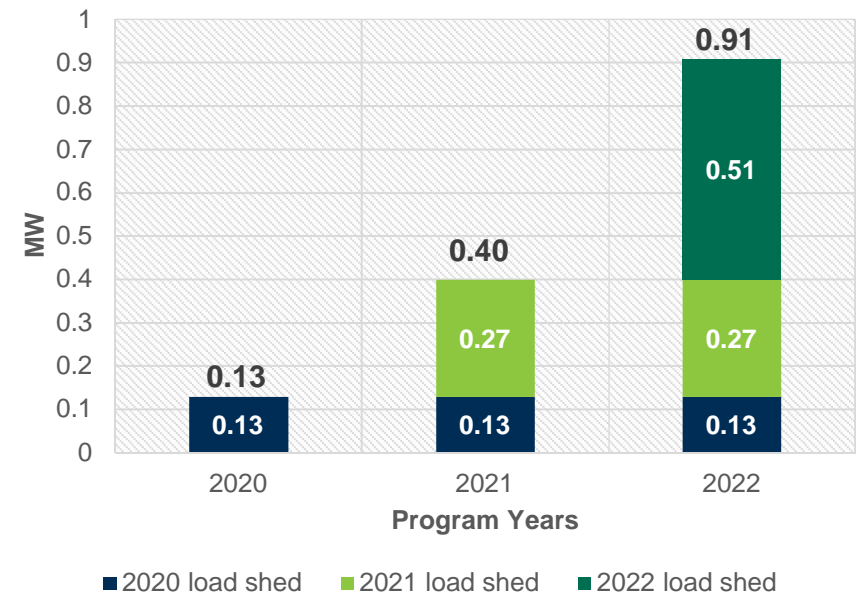
# SMALL COMMERCIAL & INDUSTRIAL APTIM/ ENERGYHUB



# SMALL COMMERCIAL & INDUSTRIAL OVERVIEW

<b>Customer Type:</b>	Small business customers (100 kW maximum demand)
<b>Event Strategy:</b>	Annual, Monday-Friday (non-holidays), 12-8pm, up to four hours per event. No more than three consecutive event days and no more than fifteen events per program year
<b>Control Strategy:</b>	Temperature setback (up to 4 degrees) with up to 90-minute pre-cool, use of Firm Load Dispatch (FLD) as applicable
<b>Eligibility:</b>	Entergy customers in Orleans parish in with active electric service, working central AC, and one or more connected devices from an EnergyHub device partner
<b>Incentive:</b>	\$25 enrollment incentive / \$40 annual incentive

## Load Reduction Goals



## SMALL COMMERCIAL & INDUSTRIAL BUDGET & SAVINGS

Small Commercial & Industrial	EM&V	Program Costs	Total Budget	kW Target	Participants
Program Year 10	\$5,901	\$84,880	\$90,781	130	87
Program Year 11	\$6,054	\$87,077	\$93,131	400	267
Program Year 12	\$8,257	\$118,765	\$127,022	910	607
<b>Totals</b>	<b>\$20,211</b>	<b>\$290,723</b>	<b>\$310,934</b>		

# SMALL COMMERCIAL & INDUSTRIAL

## Marketing & Outreach

- **Broad marketing objectives:** Raise awareness, Customer education, Enrollment call-to-action
- **Primary marketing tactics:** Direct mail, Bill inserts, Collateral, Digital marketing
- **Targeted segments:** Convenience stores, Eating/drinking establishments, Automotive/auto repair, Retail, Houses of worship, Grocery, Commercial offices
- Digital marketing directly from smart thermostat manufacturers to installed user base
- Trade allies, call center staff (ENO and APTIM) will receive training and be informed of marketing efforts

# SMALL COMMERCIAL & INDUSTRIAL

## Enrollment & Participation

- Customer enrollment will be managed directly through the Mercury platform
- Trade allies will be encouraged to enroll customers at the time of installation
- During DR events, Mercury will automatically signal thermostats of participating customers
- Customers may opt out of DR events through manual thermostat adjustment or web/mobile apps

# SMALL COMMERCIAL & INDUSTRIAL

## Enrollment & Participation

- Customers enter basic information and accept the program T&Cs
- Enrollments flow into the Mercury DERMS for review and approval

Shop Online Products Voice Installation Support For Business Login

Live comfortably. Conserve energy.

If you are a residential UtilityCo customer, you can earn a \$25 bill credit by enrolling your ecobee smart thermostat that controls your central cooling system into the UtilityCo program and also get an annual \$25 participation bill credit per thermostat enrolled in the program. Plus, you can receive a \$30 one-time rebate from the UtilityCo Smart Thermostat program for each thermostat you enroll.

READ ELIGIBILITY REQUIREMENTS  
READ TERMS AND CONDITIONS

ENROLL NOW BUY NOW

### UtilityCo Program

On really hot days when demand for electricity is the highest, your ecobee thermostat will automatically raise by no more than 2 degrees above your current temperature. Cool Rewards events will only occur between 3PM and 8PM and there will never be more than 20 events per summer.

To help maintain comfort during a Cool Rewards event, there may be a period of precooling where your ecobee thermostat will be lowered by no more than 3 degrees.

You will always have control and can easily change the temperature to your liking from your thermostat, smartphone, tablet, or computer.

### How it works in 3 easy steps:

1. Purchase, install, and register your ecobee thermostat. If you already own an ecobee thermostat, you can move to step 2.
2. Apply to the UtilityCo program. Signing up takes only a few minutes.
3. Once approved for the UtilityCo Cool Rewards program, you will earn a \$25 bill credit per thermostat controlling a central cooling system and get an annual \$25 participation bill credit per thermostat. Plus, if eligible, you can receive a \$30 one-time rebate from the UtilityCo Smart Thermostat program per thermostat.

EnergyHub | Enrollments - UtilityCo

Home Devices DR Enrollments Admin Reports

UtilityCo  
Enrollment Status Open

Enrollment List

5 PENDING 2964 ACCEPTED 31 REJECTED 9 UNENROLLED

EMAIL	REFERENCE ID	STATUS	DEVICES	PROVIDER	LAST UPDATED
cartr@energyhub.net	7550	Accepted	1	Honeywell Home	Fri Feb-01, 2019 15:55 EST
keith@energyhub.net	7549	Accepted	1	Honeywell TCC	Fri Feb-01, 2019 15:54 EST
cartr@energyhub.net	7548	Accepted	1	ecobee	Wed Jan-23, 2019 12:05 EST
raffman@energyhub.net	7544	Accepted	2	Nest	Wed Dec-19, 2018 16:31 EST
keith@energyhub.net	7527	Accepted	1	Nest	Fri Nov-02, 2018 16:30 EST
cartr@energyhub.net	7482	Unenrolled	1	ecobee	Mon Oct-01, 2018 11:57 EDT
keith@energyhub.net	7542	Accepted	1	Radio Thermostat	Tue Sep-11, 2018 15:53 EDT
keith@energyhub.net	7539	Accepted	1	Sensi	Fri Sep-07, 2018 12:29 EDT
raffman@energyhub.net	7529	Unenrolled	1	Nest	Wed Aug-08, 2018 13:14 EDT
al@energyhub.net	7436	Pending	1	Radio Thermostat	Tue May-22, 2018 17:08 EDT

Pending Enrollments (5)

Review Pending Accept or reject pending enrollments through the web portal.

Download Pending Download a data file of all pending enrollments.

Upload Pending Upload a data file to accept or reject pending enrollments.

Instructions See instructions for reviewing pending enrollments.

Changed Enrollments (1)

Review Changes Review enrollments with modified information.

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# SMALL COMMERCIAL & INDUSTRIAL

## Trade Ally Recruitment & Training

- Energy Smart's existing trade ally network will support the offering, and DR offerings will motivate new trade ally recruitment
- Pre-launch trade ally training and updated materials will support fluency of trade allies in program delivery and customer enrollment
- APTIM will enforce trade ally program standards, support trades with program assistance, and facilitate conflict resolution

# SMALL COMMERCIAL & INDUSTRIAL

## Installation Process & Device Management

- Small businesses may self-install qualifying thermostats, or receive professional installation through a trade ally
- Customers will be eligible for energy efficiency incentives on qualifying thermostats, and DR incentives for initial enrollment and ongoing participation
- Inventory management not necessary, with multiple manufacturers and trade allies supporting the market

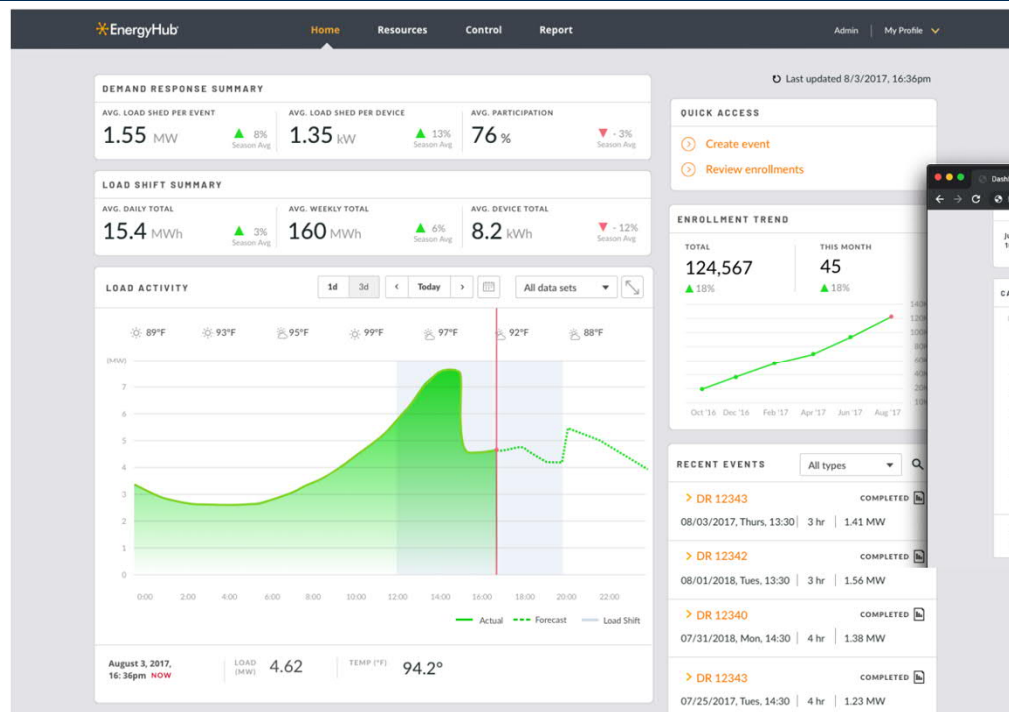


# SMALL COMMERCIAL & INDUSTRIAL

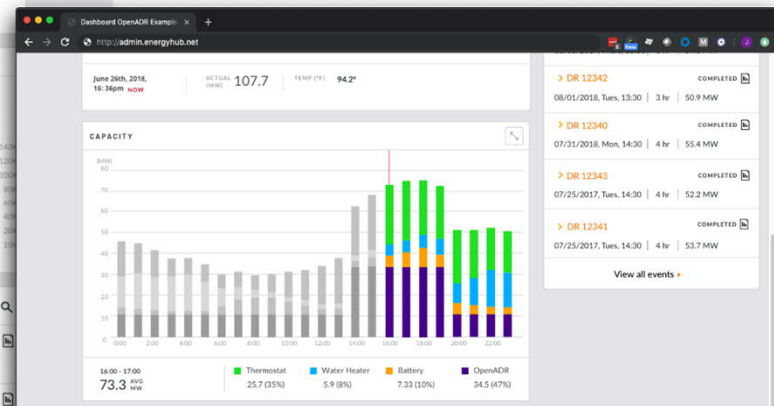
## Data Management & Tracking

- Mercury will act as the System of Record for all data collected through the Small C&I offering
- Mercury has built-in reporting, forecasting, and demand response event planning capabilities
- Data security protocols and systems access permissions will prevent malicious activity and ensure participants' sensitive data is protected

# PORTFOLIO-LEVEL REPORTING



- Summary statistics and near real-time program data



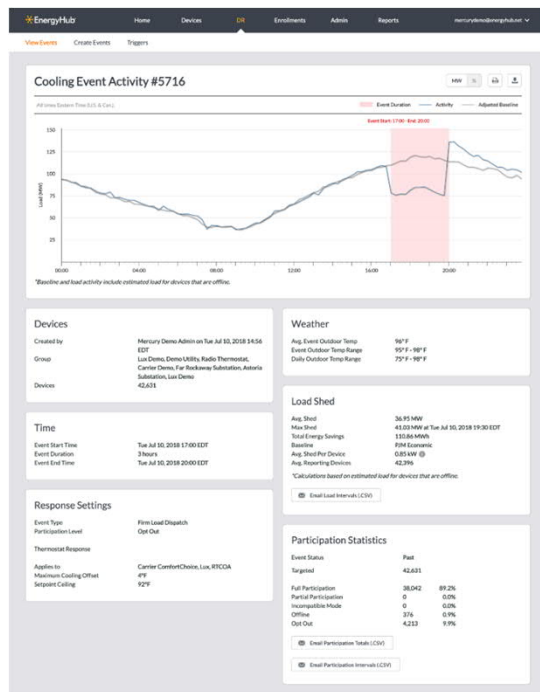
- Load and capacity forecasting for DSM decision-making

# SMALL COMMERCIAL & INDUSTRIAL

## Evaluation, Measurement & Verification (EM&V)

- ENO's Third-Party-Evaluator, ADM, will have direct access to participant data (e.g., customer enrollment info, DR event reporting) in Mercury
- QA/QC will be performed on a sampling of devices installed at participating small businesses
- Program evaluation outcomes will inform forward-looking program planning

# EVENT REPORTING & EM&V



2019-08-19 All Aggregator Performance Reports — Saved to my Mac

Home Insert Draw Page Layout Formulas Data Review View

AS8

	A	B	C	D	E	F	G	H	I	J	K
	Site ID	Emails Sent	Emails Delivered	Confirmed?	Performance Factor	Contracted Load Relief	Load Shed (KWhrs)	Utility Account Number	Meter ID	Aggregator Name	Customer Name
1	ENO1234	2	2	Yes	0.83	80	66.13632202	9540335602	80361678	EasyAgg, Inc.	Dairy Queen
2	ENO1235	2	2	Yes	1	40	44.13000107	7143887001	80332570	EasyAgg, Inc.	New Orleans School District
3	ENO1236	2	2	Yes	0.46	49	22.36240005	9024069201	80353419	EasyAgg, Inc.	New Orleans School District
4	ENO1237	2	2	Yes	0.91	30	27.44488907	9142284971	80361540	Aggregator LLC	New Orleans School District
5	ENO1238	2	2	No	1	10	61.82830811	1360117554	80345057	Aggregator LLC	Target Corporation
6	ENO1239	2	2	No	1	30	79.73646545	6077013001	80344996	Aggregator LLC	Target Corporation
7	ENO1240	2	2	Yes	0.83	400		8139924402	89980627	Aggregator LLC	Federal Courthouse
8	ENO1241	2	2	No	0.83	127	106.0367966	6150463003	80346299	New Orleans Aggregator Co.	Home Depot U.S.A. INC.
9	ENO1242	2	2	No	0	162	-35.46559906	1035015641	80345019	New Orleans Aggregator Co.	Home Depot U.S.A. INC.
10	ENO1243	2	2	No	1	114	124.776001	1155650451	80345972	New Orleans Aggregator Co.	Home Depot U.S.A. INC.

Site ID	YEAR-MONTH	Account Number	Customer	Aggregator	# of DR events	Average Hourly kW Load Shed	kW of Contracted Load Relief	Site Performance Factor	Reservation Payment	Performance Payment
GLP-9000	2018-07	90001231	AUTO RECYCLING	EE AGS	2	105	100	1.00	\$ 1,050	\$ 53
GLP-2343	2018-07	80012393	FORESTER COLLEGE	EE AGS	2	300	300	1.00	\$ 3,000	\$ 150
GLP-1231	2018-07	90043423	ROGERS GLASS	EE AGS	2	15	20	0.75	\$ 113	\$ 6
GLP-2349	2018-07	80092342	REND RECYCLING	CCC ENERGY	2	129	100	1.00	\$ 1,290	\$ 65
GLP-7873	2018-07	80009887	APLHA DISTRIBUTORS	CCC ENERGY	2	50	60	0.83	\$ 417	\$ 21
GLP-6533	2018-07	80003453	TRAINERS INC		2	25	25	1.00	\$ 250	\$ 13



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# LARGE COMMERCIAL & INDUSTRIAL – HONEYWELL/ ENBALA

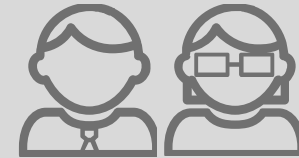
## Edge to Cloud Solutions

HONEYWELL SMART ENERGY | UTILITY PARTNER



### Global Footprint

Operates in over **130** countries  
**1,000+** Utility Customers



**5,500+** Employees

Honeywell Smart Energy's solutions provide actionable insights to utilities, by connecting assets, process, people and things to harness the value of data across the ecosystem. By leveraging our relationships across our entire Honeywell portfolio of products we bring immediate value to utility clients providing quick scalability.



## OUR COMMITMENT



Trusted Partner  
Accelerate Innovation  
Security  
Industry Standard Technologies  
Proven Interoperability  
Advanced Demand Response

# LARGE COMMERCIAL & INDUSTRIAL OVERVIEW

<b>Customer Type:</b>	Commercial and industrial customers (greater than 100 kW demand or under automated controls.)
<b>Duration:</b>	Program availability: Monday-Friday (non-holidays), 12-8pm, up to four hours per event. No more than three consecutive event days and no more than fifteen events annually
<b>Control Strategy</b>	Dependent upon load shed strategy. Signaling gateway incorporated into the site control system. HVAC, motors, industrial process, manufacturing processes, refrigeration, etc. are among the most common shed strategies
<b>Eligibility:</b>	Entergy New Orleans customers with active electric service and functioning control architecture capable of executing load shed strategies
<b>Incentive:</b>	\$500-\$4000/ annually paid in two seasonal payouts (winter/summer) Tiered incentive scale based on load shed enrolled into the program.

## TARGET SEGMENT

Manufacturers (Aero Components, Petro, Animal Feed, Baked Goods, Powder-Coating, Pump, Soft Drinks), Processing (Dairy, Construction, Food, Injection Molding), Beverage/Bottling, Printing

Hospitals, Large Area Services, Multi Family Residences, Convention Center, Cold Storage, Airport, Food & Beverage Distribution

Offices, Warehouses, Museums, High Rise Offices, Office Supply Stores, Fueling Stations, Home Improvement, Hospitality, Country Club, Recycling Facilities, Condominiums, Research/Testing Facilities

University Campuses, Schools

Outdoor Services, Transportation, Offices, County Jail, Government Facilities, Waste Water Treatment, Water Districts, Industrial Gas

Hospitals, Clinics



## LARGE COMMERCIAL & INDUSTRIAL BUDGET & SAVINGS

Large Commercial & Industrial	EM&V	Program Costs	Total Budget	kW Target	Participants
Program Year 10	\$73,988	\$1,064,270	\$1,138,258	2,239	12
Program Year 11	\$55,181	\$793,745	\$848,926	5,597	18
Program Year 12	\$61,318	\$882,020	\$943,338	9,328	20
<b>Totals</b>	<b>\$190,487</b>	<b>\$2,740,035</b>	<b>\$2,930,522</b>		



# LARGE COMMERCIAL & INDUSTRIAL

## Marketing and Outreach

- Direct C&I outreach
- Collaboration with ENO account managers
- Business case development
- Trade ally collaboration

### LIGHT MANUFACTURING



- Decision maker(s) may not be the owner
- May have extended hours & high energy intensity due to processing equipment
- Understanding the business needs is crucial to relationship
- Outreach via outbound calling, local trade associations

### NATIONAL ACCOUNTS



- Multiple facilities with similar profiles
- Typically one decision maker for all locations; may not be local
- Prefer simple programs for HVAC & lighting
- Outreach via outbound calling and trade associations
- Need direct hands-on support for program participation

### INDUSTRIAL ACCOUNTS



- Large facility C&I, process vs. facility
- Typically decision by committee
- Comparing benefits of demand response to capital or other projects, considerate of primary purpose
- Custom programs more prevalent, due to specialty
- Outreach via collaboration with Entergy account managers
- F2F, specialty allies drive program participation

# LARGE COMMERCIAL & INDUSTRIAL

## Customer Journey

- Approach customer with program opportunity
- Engineering meeting with customer / facility
- Audit facility / processes / controls
- Feasibility, curtailment planning and load shed strategy created.
- Project approved
- Coordination of installations (agnostic, trade ally, in house)
- Commissioning
- Event participation

## Reduction Targets

- HVAC
- Motor loads
- Refrigeration
- Process loads
- Manufacturing loads



# ENBALA ADVANCED CONTROL SOFTWARE PROVIDES UNIQUE BENEFITS



**Fast dispatch of DR resources where customer constraints are never exceeded**



**Flexibility for how customers participate from 100% customer control to fully automated**



**Customer opt-out ability is always preserved**



**Unlimited ways to group how customers are dispatched – only the assets needed, where they're needed**



**Real-time measurement & verification of customer performance**



**Software constantly re-optimizing based on real-time results of over/under performing customers**





**Entergy will be provided a user interface to view real time status of assets**



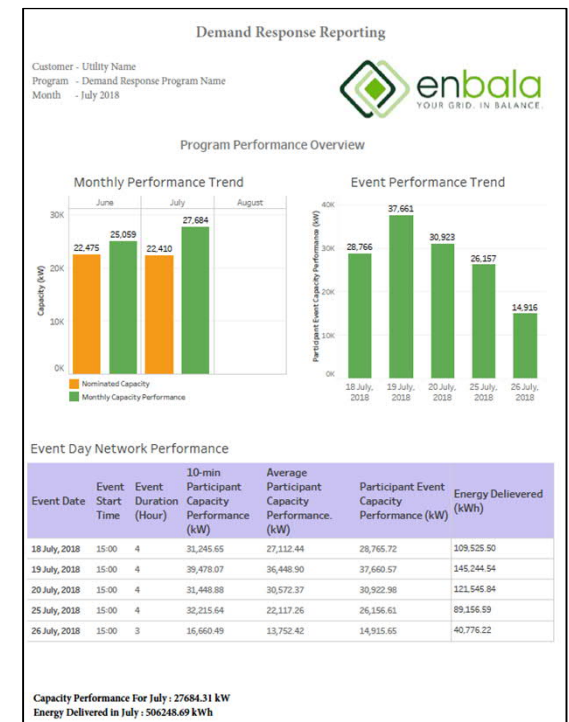
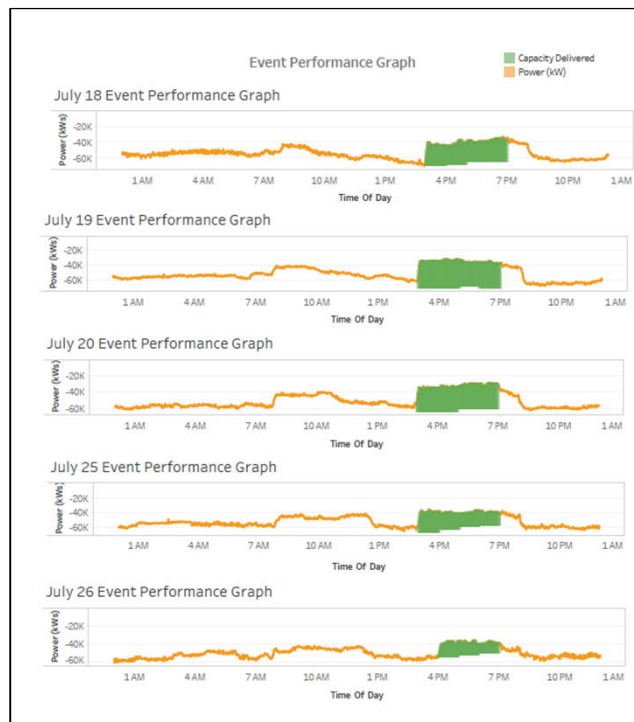
**Technology agnostic & future-proof to incorporate new and changing technologies**

# ASSET DIVERSITY

<i>Segment</i>		<i>Water Heaters</i>	<i>Pumps</i>	<i>Chillers</i>	<i>HVAC</i>	<i>Comp. Air</i>	<i>Cooling Towers</i>	<i>PV &amp; Wind</i>	<i>CHP / CoGen</i>	<i>Battery Storage</i>	<i>EV</i>
Municipal Water & Wastewater			✓					✓	✓	✓	
Industrial Gas				✓	✓			✓		✓	
Automotive				✓	✓	✓				✓	
Refrigerated Storage			✓	✓			✓	✓		✓	
Hospitals				✓	✓		✓		✓	✓	✓
Campuses		✓		✓	✓			✓	✓	✓	✓
Commercial Buildings		✓	✓	✓	✓		✓	✓	✓	✓	✓

# EVENT REPORTING

- Rich reporting database available to create custom reports for Entergy
- Flexibility to provide data at Virtual Power Plant level, specific geographies, sites, assets, etc.
- Real-time performance in UI



# LARGE COMMERCIAL & INDUSTRIAL

## Evaluation, Measurement & Verification (EM&V)

- ENO's Third-Party-Evaluator, ADM, will have direct access to participant data
- QA/QC will be performed on a sampling of devices installed at participating facilities
- Program evaluation, participation levels, interviews and performance will inform forward-looking program planning



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# 2018 INTEGRATED RESOURCE PLAN

## POTENTIAL STUDIES REVIEW

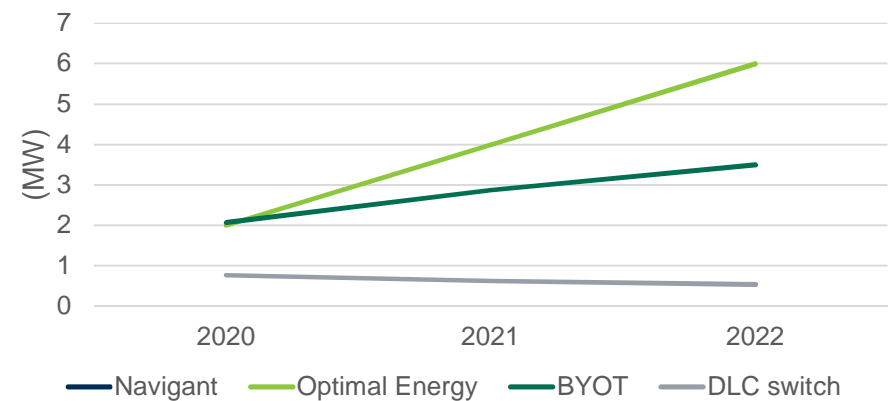
# POTENTIAL STUDIES REVIEW – *RESIDENTIAL*

## Residential Demand Response Peak Load Reductions Summary

### Assumptions:

- Optimal Energy study only\*
- Scenario One (p.52)
- DLC/ADR programs only
- 2018-2020 forecast
- Load shed: 1 kW/thermostat and 0.5 kW/switch

\*Navigant study showed potential residential demand response reduction after the first three years



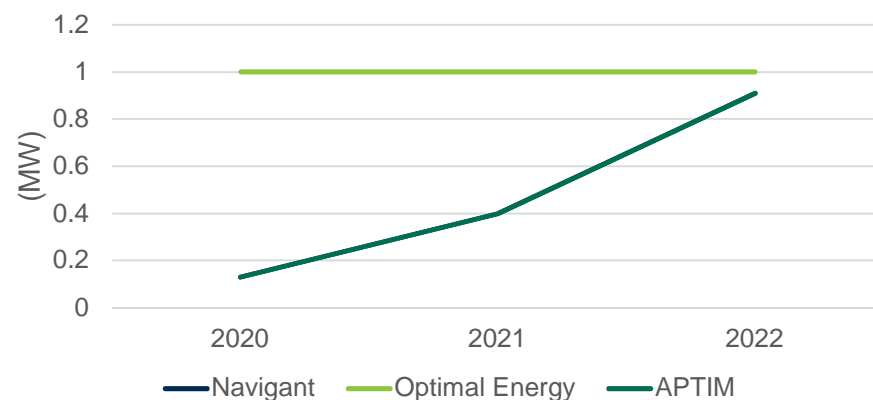


## POTENTIAL STUDIES REVIEW – SMALL C&I

### Small C&I Demand Response Peak Load Reductions Summary

#### **Assumptions:**

- Numbers based on 2018-2020 forecasts
- Optimal Energy numbers based on scenario two (only ADR), p.52
- Navigant numbers based on 48% of small C&I DR potential, pp.81-82



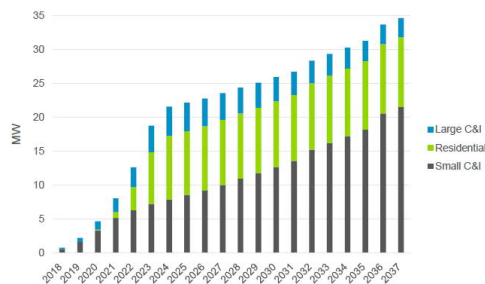
Entity	2020	2021	2022
Navigant	0.13	0.40	0.91
Optimal Energy	1	1	1
APTIM	0.13	0.40	0.91

# POTENTIAL STUDIES REVIEW – *LARGE C&I*

## **Assumptions:**

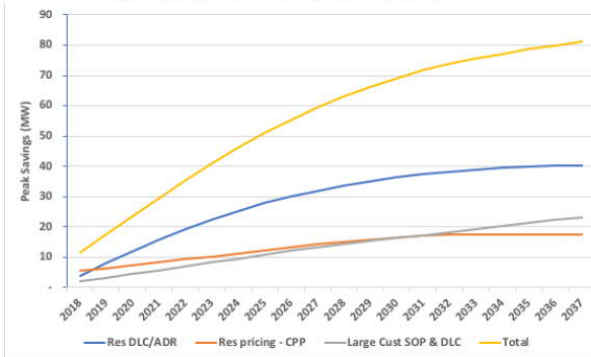
- Review of Optimal and Navigant Studies.
- Took into consideration 2018-2020 and 2021-2024 forecasts.
- Optimal Energy numbers based on scenario two p.52
- Navigant numbers based on large C&I DR potential, p.81-82

Figure 4-6. Summer DR Achievable Potential by Customer Class (MW)

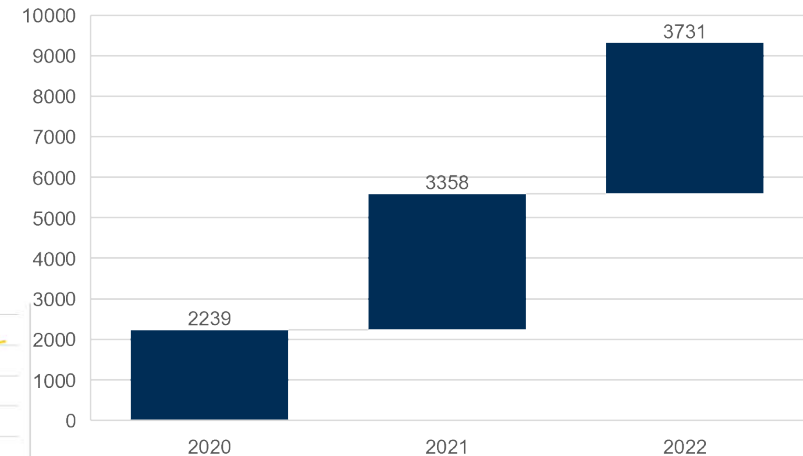


Source: Navigant analysis

Figure 17 | Electric Demand Savings - Scenario Two



Annual and cumulative shed (kW)



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## BUDGET & SAVINGS

## PY10-12 SUMMARY BY PROGRAM YEAR

Program Year	EM&V	Program Costs	Total Budget	kW Target	Participants
Program Year 10	\$122,239	\$1,758,335	\$1,880,575	5,199	3,515
Program Year 11	\$101,996	\$1,467,145	\$1,569,141	9,491	4,256
Program Year 12	\$111,941	\$1,610,201	\$1,722,142	14,270	5,071
<b>Totals</b>	<b>\$336,177</b>	<b>\$4,835,681</b>	<b>\$5,171,858</b>		

## PROGRAM YEAR 10

Offering	EM&V	Program Costs	Total Budget	kW Target	Participants
Residential - BYOT	\$18,254	\$262,569	\$280,822	2,066	2,066
Residential - DLC	\$24,097	\$346,616	\$370,713	764	1,350
Small Commercial & Industrial	\$5,901	\$84,880	\$90,781	130	87
Large Commercial & Industrial	\$73,988	\$1,064,270	\$1,138,258	2,239	12
<b>Total</b>	<b>\$122,239</b>	<b>\$1,758,335</b>	<b>\$1,880,575</b>		

## PROGRAM YEAR 11

Offering	EM&V	Program Costs	Total Budget	kW Target	Participants
Residential - BYOT	\$19,600	\$281,928	\$301,528	2,871	2,871
Residential - DLC	\$21,162	\$304,394	\$325,556	623	1,100
Small Commercial & Industrial	\$6,054	\$87,077	\$93,131	400	267
Large Commercial & Industrial	\$55,181	\$793,745	\$848,926	5,597	18
<b>Total</b>	<b>\$101,996</b>	<b>\$1,467,145</b>	<b>\$1,569,141</b>		

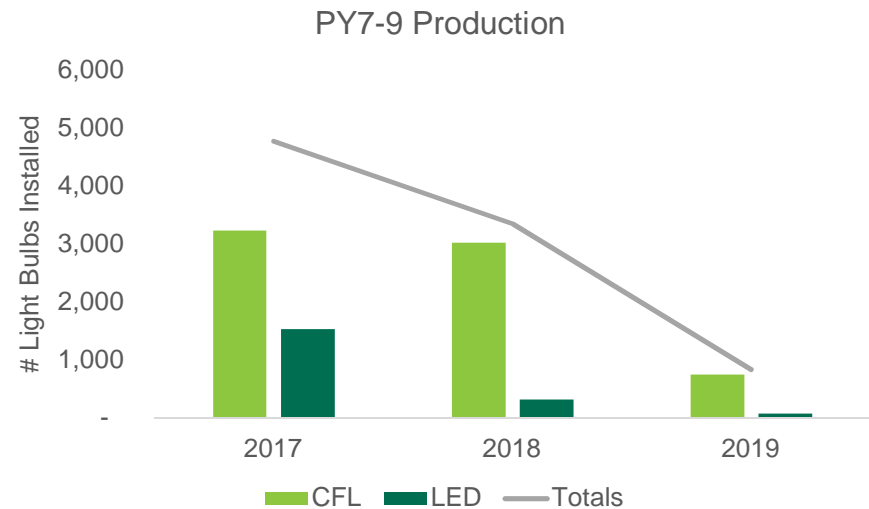
## PROGRAM YEAR 12

Offering	EM&V	Program Costs	Total Budget	kW Target	Participants
Residential - BYOT	\$22,602	\$325,116	\$347,719	3,494	3,494
Residential - DLC	\$19,764	\$284,299	\$304,063	538	950
Small Commercial & Industrial	\$8,257	\$118,765	\$127,022	910	607
Large Commercial & Industrial	\$61,318	\$882,020	\$943,338	9,328	20
<b>Total</b>	<b>\$111,941</b>	<b>\$1,610,201</b>	<b>\$1,722,142</b>		

# GREEN LIGHT NEW ORLEANS

## Green Light New Orleans

	Light Bulbs Installed
Program Year 1	90,254
Program Year 2	61,984
Program Year 3	68,428
Program Year 4	46,277
Program Year 5	35,877
Program Year 6	8,178
Program Year 7	4,770
Program Year 8	3,341
Program Year 9	830
<b>Total</b>	<b>319,939</b>



**\$76,781 budget remaining**



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## QUESTIONS & DISCUSSION

## **CERTIFICATE OF SERVICE**

### **Docket No. UD-17-03**

I hereby certify that I have served the required number of copies of the foregoing report upon all other known parties of this proceeding, by the following: electronic mail, facsimile, overnight mail, hand delivery, and/or United States Postal Service, postage prepaid.

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Harry M. Barton